

Twelfth Census of the United States.

# CENSUS BULLETIN.

No. 178.

WASHINGTON, D. C.

June 3, 1902.

## AGRICULTURE.

### NORTH CAROLINA.

HON. WILLIAM R. MERRIAM,

*Director of the Census.*

SIR: I have the honor to transmit herewith, for publication in bulletin form, the statistics of agriculture in the state of North Carolina, taken in accordance with the provisions of section 7 of the act of March 3, 1899. This section requires that—

The schedules relating to agriculture shall comprehend the following topics: Name of occupant of each farm, color of occupant, tenure, acreage, value of farm and improvements, acreage of different products, quantity and value of products, and number and value of live stock. All questions as to quantity and value of crops shall relate to the year ending December thirty-first next preceding the enumeration.

A "farm," as defined by the Twelfth Census, includes all the land, under one management, used for raising crops and pasturing live stock, with the wood lots, swamps, meadows, etc., connected therewith. It includes also the house in which the farmer resides, and all other buildings used by him in connection with his farming operations.

The farms of North Carolina, June 1, 1900, numbered 224,637, and had a value of \$194,655,920. Of this amount \$52,700,080, or 27.1 per cent, represents the value of buildings, and \$141,955,840, or 72.9 per cent, the value of land and improvements other than buildings. On the same date the value of farm implements and machinery was \$9,072,600, and that of live stock, \$30,106,173. These values, added to that of farms, give \$233,834,693, the "total value of farm property."

The products derived from domestic animals, poultry, and bees, including animals sold and animals slaughtered on farms, are referred to in this bulletin as "animal products."

The total value of all such products, together with the value of all crops, is termed "total value of farm products." This value for 1899 was \$89,309,638, of which amount \$20,684,727, or 23.2 per cent, represents the value of animal products, and \$68,624,911, or 76.8 per cent, the value of crops, including forest products cut or produced on farms. The "total value of farm products" for 1899 exceeds that reported for 1889 by \$39,239,108, or 78.4 per cent.

The value of "net farm products," or the "gross farm income," is obtained by deducting from the total value of farm products the value of the products fed to live stock on the farms of the producers. In 1899 the reported value of products fed was \$10,108,890, leaving \$79,200,748 as the gross farm income for that year. The ratio which this latter amount bears to the "total value of farm property" is referred to as the "percentage of gross income upon investment." For North Carolina in 1899 it was 33.9 per cent.

As no reports of expenditures for taxes, interest, insurance, feed for stock, and similar items have been obtained by any census, no statement of net farm income can be given.

The statistics presented in this bulletin will be treated in greater detail in the final report on agriculture in the United States. The present publication is designed to present a summarized advance statement for North Carolina.

Very respectfully,

*L. G. Powers.*

*Chief Statistician for Agriculture.*

# AGRICULTURE IN NORTH CAROLINA.

## GENERAL STATISTICS.

The total land surface of North Carolina is 48,580 square miles, or 31,091,200 acres, of which 22,749,356 acres, or 73.2 per cent, are included in farms.

Topographically, the state has three natural divisions: the eastern, middle, and western.

Eastern North Carolina is low, and its coast line is deeply indented by Albemarle Sound, the broad estuaries of the Neuse and Pamlico rivers, and by many creeks. In the northeast are the Great and Little Dismal swamps, which, together with the chain of swamps and peat bogs extending southward through the counties bordering on the ocean and the sound, embrace an area of nearly 3,000,000 acres. Although a large part of this swamp area is at present of little value, much of it may be rendered available for agricultural purposes, by the introduction of drainage-canal systems. In some sections large tracts have already been reclaimed in this manner. The soil in the eastern division is, to a large extent, sandy and barren, although along the courses of the numerous streams the land is remarkably productive.

The middle division of the state, extending back to the mountains, is watered by numerous rivers and is either cultivated or covered with deciduous trees. The surface is undulating, and the soil rich and arable. This division is especially suited for orchards and vineyards.

Western North Carolina includes the mountains and high table-lands, none of which are less than 1,500 feet above tide water. The Appalachian system here reaches its greatest height, and includes the Blue Ridge, the Black, the Smoky, the Iron, and the Unaka mountains. These are all fertile to their summits, and are covered for the most part with magnificent forests. The valleys between the ranges are well watered and very productive. This division is well adapted to grazing, and to the raising of cereals, vegetables, and fruits.

### NUMBER AND SIZE OF FARMS.

Table 1 gives, by decades since 1850, the number of farms, the total and average acreage, and the per cent of farm land improved.

TABLE 1.—FARMS AND FARM ACREAGE: 1850 TO 1900.

YEAR.	Number of farms.	NUMBER OF ACRES IN FARMS.				Per cent of farm land improved.
		Total.	Improved.	Unimproved.	Average.	
1900.....	224,637	22,749,356	8,827,106	14,422,250	101.3	36.6
1890.....	178,859	22,651,896	7,828,569	14,823,327	127.0	34.6
1880.....	157,609	22,323,528	6,481,191	15,842,337	141.9	29.0
1870.....	98,668	19,835,410	5,258,742	14,576,668	212.0	26.5
1860.....	75,203	21,762,969	6,517,284	17,245,685	316.0	27.4
1850.....	56,968	20,996,983	5,453,975	15,543,008	368.6	26.0

The number of farms reported in 1900 was nearly four

times as great as the number reported in 1850, and 25.0 per cent greater than in 1890. The total and improved acreages, however, show decreases for the Civil War decade, the loss in the former not having been entirely recovered as yet, though gains are shown for each decade since 1870. The improved acreage recovered more rapidly, having increased 58.3 per cent since 1870, and 6.4 per cent in the last decade. The average size of farms shows a marked decrease for each decade, the number of farms having increased much faster since 1850 than the total acreage. This movement indicates a progressive division of farm holdings, and is in keeping with the steady increase since 1870 in the percentage of improved farm land.

### FARM PROPERTY AND PRODUCTS.

Table 2 presents a summary of the principal statistics relating to farm property and products for each census year beginning with 1850.

TABLE 2.—VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND OF FARM PRODUCTS: 1850 TO 1900.

YEAR.	Total value of farm property.	Land, improvements, and buildings.	Implements and machinery.	Live stock.	Farm products. <sup>1</sup>
1900.....	\$233,831,693	\$194,655,920	\$9,072,600	\$30,106,173	\$59,809,638
1890.....	216,707,509	183,977,010	7,183,210	25,547,280	50,070,630
1880.....	164,286,737	135,793,602	6,078,476	22,414,659	51,729,611
1870 <sup>2</sup> .....	104,287,161	78,211,683	4,082,111	21,993,967	57,845,940
1860.....	180,305,812	143,301,665	5,871,912	31,130,805	-----
1850.....	89,540,945	67,891,766	3,981,532	17,717,647	-----

<sup>1</sup> For the year preceding that designated.

<sup>2</sup> Values for 1870 were reported in depreciated currency. To reduce to specie basis of other years they must be diminished one-fifth.

<sup>3</sup> Includes betterments and additions to live stock.

The rapid development of agriculture in the decade from 1850 to 1860; the disastrous effects of the Civil War, from which the state did not entirely recover until between 1880 and 1890; and the steady increase in values since that period, are the most interesting features of the statistics given in the above table.

The increase in the total value of farm property in the last decade was \$17,127,193, or 7.9 per cent. Of this amount, \$10,678,910, or 62.4 per cent, represents the increase in the value of farms; \$4,558,893, or 26.6 per cent, in that of live stock; and \$1,889,390, or 11.0 per cent, in that of implements and machinery. The value of farm products for 1899 exceeds that for 1889 by \$39,239,108, or 78.4 per cent. A part of this gain, and of that in implements and machinery, and in live stock, is doubtless the result of a more detailed enumeration in 1900 than in previous census years.

### COUNTY STATISTICS.

Table 3 presents the general agricultural statistics by counties.

TABLE 3.—NUMBER AND ACREAGE OF FARMS, AND VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, JUNE 1, 1900, WITH VALUE OF PRODUCTS OF 1899 NOT FED TO LIVE STOCK, AND EXPENDITURES IN 1899 FOR LABOR AND FERTILIZERS, BY COUNTIES.

COUNTIES.	NUMBER OF FARMS.		ACRES IN FARMS.		VALUES OF FARM PROPERTY.				Value of products not fed to live stock.	EXPENDITURES.	
	Total.	With build- ings.	Total.	Improved.	Land and improve- ments (ex- cept build- ings).	Buildings.	Imple- ments and machinery.	Live stock.		Labor.	Fertili- zers.
The State	224,637	217,744	22,749,356	8,327,106	\$141,955,840	\$52,700,080	\$9,072,600	\$30,106,173	\$79,200,748	\$5,444,950	\$1,479,030
Alamance	2,296	2,258	214,178	97,229	1,449,050	720,330	133,640	368,947	782,507	33,440	36,380
Alexander	1,880	1,818	157,619	65,576	1,071,120	283,760	67,680	217,936	504,448	12,580	18,060
Alleghany	1,367	1,311	145,200	84,996	1,416,710	331,250	70,060	354,335	401,998	22,190	5,360
Anson	2,940	2,844	309,986	116,084	1,515,990	535,870	119,240	328,026	1,134,061	81,120	76,110
Ashe	3,099	3,034	272,137	154,575	3,021,440	692,240	100,320	728,767	840,978	45,130	4,020
Beaufort	2,431	2,322	248,104	65,823	1,273,480	575,930	86,770	303,765	844,673	67,810	57,990
Bertie	2,663	2,591	311,428	109,239	1,153,570	498,400	102,160	302,510	1,023,790	155,150	49,050
Bladen	2,488	2,426	364,103	68,738	920,720	402,260	66,270	247,621	579,541	29,040	25,180
Brunswick	1,373	1,366	252,117	31,243	500,240	253,160	45,400	160,076	480,681	35,840	26,120
Buncombe	4,140	4,015	318,614	142,283	4,234,110	1,608,040	158,970	626,353	1,102,005	72,560	12,420
Burke	2,222	2,177	222,551	65,700	1,608,920	429,390	93,800	304,723	539,203	21,590	12,590
Cabarrus	2,045	2,005	209,125	98,582	1,815,670	619,360	133,530	360,838	908,336	45,310	36,510
Caldwell	2,203	2,146	231,497	71,151	1,756,000	478,750	96,100	314,926	588,281	19,130	12,100
Camden	858	838	76,519	44,656	619,360	232,520	29,480	121,140	284,927	13,980	6,980
Carver	754	747	74,761	18,626	314,720	138,050	20,980	80,522	162,613	9,690	10,430
Caswell	1,745	1,721	243,737	113,824	1,162,710	627,230	87,540	273,406	860,039	58,430	54,020
Catawba	2,647	2,610	239,824	116,379	2,053,150	705,440	168,580	375,660	879,456	25,320	47,800
Chatham	3,005	3,530	411,084	132,427	1,640,460	739,700	149,100	518,091	1,097,806	45,000	53,860
Cherokee	1,731	1,697	208,359	41,927	782,540	210,580	38,870	236,271	412,927	9,880	560
Chowan	893	825	72,528	34,972	493,300	233,800	40,040	115,405	373,579	46,900	15,750
Clay	817	765	97,462	23,973	451,300	123,290	20,840	136,289	293,001	7,290	480
Cleveland	3,440	3,340	258,042	126,058	2,609,240	919,400	160,270	433,386	1,172,472	33,910	67,560
Columbus	2,861	2,815	360,855	68,471	1,167,150	492,840	83,470	290,764	715,763	52,170	46,940
Craven	1,725	1,645	211,523	55,985	1,067,810	343,360	62,150	205,532	592,848	85,960	81,440
Cumberland	2,673	2,624	362,609	88,461	1,553,310	589,680	91,710	335,244	908,002	67,390	59,760
Currituck	912	888	89,273	39,068	620,890	268,980	31,430	127,730	298,961	18,890	20,510
Dare	229	226	14,937	2,619	91,210	81,030	7,850	22,766	51,765	2,890	2,180
Davidson	3,419	3,350	329,043	132,731	2,497,260	959,580	222,050	609,687	1,141,430	34,710	46,010
Davie	1,742	1,631	149,302	68,650	1,161,480	377,510	82,630	248,369	488,079	15,770	14,100
Duplin	3,393	3,168	389,366	113,805	1,620,390	731,640	98,790	353,413	1,079,204	104,360	83,780
Durham	1,548	1,486	148,281	49,303	1,018,230	423,510	56,690	189,310	491,891	32,050	21,860
Edgecombe	2,284	2,164	277,376	139,426	1,895,850	753,200	122,200	366,098	1,650,094	250,780	120,260
Forsyth	2,421	2,375	228,432	101,606	2,240,350	915,010	169,000	373,052	899,133	48,980	50,510
Franklin	3,367	3,254	267,530	117,900	1,553,760	647,660	111,340	394,062	1,294,286	99,410	97,420
Gaston	2,213	2,140	201,993	88,659	1,994,000	790,880	117,090	354,982	874,309	85,310	39,390
Gates	1,461	1,441	187,494	53,425	671,740	411,510	54,440	193,052	528,348	40,940	19,090
Graham	732	723	103,617	18,360	272,730	72,620	13,870	104,591	149,096	4,150	130
Granville	3,135	3,018	309,216	118,420	1,585,840	888,420	100,420	372,185	1,176,764	123,910	77,380
Greene	2,071	1,716	156,362	37,050	1,355,390	458,420	83,950	239,196	1,083,955	73,690	82,270
Gulfport	3,497	3,380	338,940	149,228	2,693,270	1,169,180	206,280	571,076	1,216,294	78,880	58,310
Halifax	3,489	3,371	380,627	103,951	2,087,450	708,910	133,720	460,690	1,855,028	228,980	93,380
Harnett	2,316	2,258	230,859	70,179	1,059,090	399,440	81,510	279,139	680,559	38,850	46,030
Haywood	2,349	2,053	251,587	84,541	1,336,850	627,470	85,750	445,278	613,851	15,710	5,450
Henderson	1,853	1,805	165,409	61,670	1,497,350	486,850	68,760	250,054	484,080	14,350	6,700
Hertford	1,788	1,732	181,955	63,324	1,021,430	509,990	66,320	215,856	698,600	73,180	41,350
Hyde	1,061	1,040	92,682	42,677	1,084,230	342,770	46,990	130,152	255,525	26,490	15,330
Iredell	3,897	3,789	353,363	150,174	2,540,840	907,470	196,970	571,579	1,207,648	57,990	56,570
Jackson	1,935	1,888	211,056	55,773	888,930	296,910	42,510	260,192	444,815	11,380	3,170
Johnston	4,452	4,378	371,000	107,339	2,619,970	1,002,280	177,480	553,708	1,320,012	121,320	149,580
Jones	1,226	1,145	191,028	56,122	733,570	239,960	54,380	174,828	476,804	37,680	26,780
Lenoir	2,179	2,023	215,911	101,996	1,625,520	618,390	91,150	291,455	1,185,000	119,810	107,380
Lincoln	1,866	1,831	180,482	84,218	1,489,450	488,880	106,210	298,384	631,111	20,590	32,060
McDowell	1,827	1,788	189,569	47,420	1,247,160	275,670	43,420	213,132	437,132	11,310	8,000
Macon	1,888	1,841	213,637	56,685	857,910	317,050	45,410	269,776	430,144	14,350	910
Madison	3,382	3,249	228,718	100,621	1,577,210	509,090	61,680	419,048	724,266	19,210	5,320
Martin	1,689	1,624	201,719	72,643	894,910	404,400	66,940	215,029	787,747	118,020	68,680
Mecklenburg	4,190	4,099	315,414	173,204	4,150,720	1,317,490	232,690	708,286	1,859,390	152,760	108,940
Mitchell	2,287	2,230	178,972	66,562	1,341,650	409,720	47,020	323,063	598,668	11,380	410
Montgomery	1,564	1,552	227,844	51,644	754,480	303,080	57,500	196,713	498,019	30,610	23,200
Moore	2,773	2,734	369,007	89,351	1,351,020	635,310	106,560	348,105	857,258	55,260	86,430
Nash	3,237	3,116	308,317	119,988	1,668,770	691,480	124,460	364,133	1,479,920	126,810	143,960
New Hanover	379	368	49,581	9,728	346,530	138,000	15,650	49,875	148,212	30,950	11,590
Northampton	2,837	2,722	251,867	126,873	1,237,440	617,150	109,160	342,970	1,235,847	104,400	53,380
Onslow	1,632	1,581	263,326	62,864	698,650	312,910	45,790	184,825	420,388	25,970	12,170
Orange	2,044	1,985	214,346	78,639	959,160	519,680	77,660	255,727	660,866	31,340	27,110
Pamlico	813	796	78,493	22,333	388,810	165,560	26,320	92,006	282,169	18,860	28,020
Pasquotank	1,125	1,071	80,862	49,094	706,070	315,540	55,350	169,951	393,454	26,410	15,340
Pender	1,975	1,906	295,248	52,090	939,190	388,060	59,120	211,674	473,418	44,580	22,670
Perquimans	1,267	1,222	96,912	50,524	781,670	384,150	54,790	231,058	578,013	61,500	18,520
Person	1,971	1,924	228,904	86,119	967,190	471,610	70,930	234,386	768,898	58,840	55,160
Pitt	4,022	3,728	355,152	151,847	2,752,200	954,080	147,230	481,762	2,173,929	262,040	166,910
Polk	1,048	1,017	100,493	30,537	633,820	191,350	34,170	131,487	366,281	8,470	6,310
Randolph	3,739	3,691	481,754	140,507	2,252,100	923,100	231,470	683,418	1,039,355	88,000	61,390
Richmond	1,462	1,441	180,504	57,593	803,190	290,110	68,180	194,518	632,746	56,050	58,180
Robeson	4,848	4,764	498,173	174,801	3,525,900	1,116,980	190,340	568,616	2,166,431	199,620	247,280
Rockingham	3,196	3,151	336,719	115,874	2,155,400	863,460	142,710	425,208	1,358,600	85,930	97,270
Rowan	3,082	3,021	295,184	132,196	2,248,190	821,690	200,040	490,008	1,286,510	45,290	60,330
Rutherford	3,365	3,207	274,412	99,511	1,999,060	596,820	114,720	381,326	876,433	15,850	53,880
Sampson	3,783	3,699	487,864	148,886	2,200,770	866,580	146,350	484,794	1,259,255	64,840	82,840
Scotland	1,080	1,061	127,403	61,442	1,752,380	417,320	72,030	175,999	886,686	72,270	86,410

TABLE 3.—NUMBER AND ACREAGE OF FARMS, AND VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, JUNE 1, 1900, WITH VALUE OF PRODUCTS OF 1899 NOT FED TO LIVE STOCK, AND EXPENDITURES IN 1899 FOR LABOR AND FERTILIZERS, BY COUNTIES—Continued.

COUNTIES.	NUMBER OF FARMS.		ACRES IN FARMS.		VALUES OF FARM PROPERTY.				Value of products not fed to live stock.	EXPENDITURES.	
	Total.	With build-ings.	Total.	Improved.	Land and improve-ments (ex-cept build-ings).	Buildings.	Imple-ments and machinery.	Live stock.		Labor.	Fertili-zers.
Stanly	1,983	1,963	215,018	85,466	\$986,280	\$421,210	\$113,900	\$290,675	\$748,885	\$40,520	\$36,920
Stokes	3,234	3,130	256,521	88,648	1,754,870	730,920	114,430	354,590	1,017,766	82,130	68,430
Surry	3,523	3,458	291,989	90,467	1,935,840	737,520	118,870	375,873	870,521	21,520	48,000
Swain	1,225	1,171	164,439	27,036	620,480	176,210	26,310	166,519	263,209	7,730	210
Transylvania	1,008	960	112,781	29,734	791,320	240,280	38,030	156,972	215,142	9,910	3,240
Tyrrell	657	649	62,260	19,840	225,710	125,770	23,100	68,354	163,999	11,170	7,710
Union	3,733	3,737	316,097	149,143	2,057,870	630,400	130,990	520,553	1,367,085	50,070	100,320
Vance	1,680	1,595	149,754	63,613	888,900	406,070	56,030	184,319	619,902	58,460	48,310
Wake	5,188	5,029	476,608	195,548	3,252,640	1,371,130	218,600	655,241	2,163,811	155,300	128,760
Warren	2,616	2,544	214,142	89,638	1,096,210	491,290	77,330	251,892	851,982	59,830	53,690
Washington	970	943	85,891	36,046	540,770	269,160	48,800	115,601	364,169	44,920	10,790
Watauga	2,170	2,105	208,559	88,423	1,829,830	484,070	66,980	401,127	544,798	5,710	2,310
Wayne	3,291	3,164	337,162	145,199	2,507,520	860,020	138,020	394,185	1,679,462	135,600	126,010
Wilkes	4,387	4,277	418,398	182,307	2,197,590	644,390	116,590	454,070	876,444	34,060	16,340
Wilson	2,565	2,470	212,686	99,762	1,952,600	619,280	98,910	332,691	1,520,510	120,300	131,000
Yadkin	2,242	2,207	207,294	77,907	1,533,690	489,860	98,570	279,750	588,359	22,880	20,800
Yancey	2,028	1,956	158,309	53,120	1,119,030	319,460	36,500	281,405	469,821	20,320	1,200

Aside from Richmond, in which a territorial change has been made, but three counties, Carteret, Chatham, and Currituck, report decreases in the number of farms since 1890. In the remaining counties the rates of increase were about the same as that shown in the state total—25.9 per cent. Pitt county reports the greatest relative gain, the number of its farms having almost doubled.

Increases in the total farm acreages are reported for about one-half of the counties, and almost two-thirds show increased areas of improved land. A large proportion of the counties reporting increases in improved land are in the southwestern part of the state. The average size of farms for the state is 101.3 acres, ranging in the several counties from 75 to 150 acres. The average value of the farms of the state is \$866.54. In nearly one-fourth of the counties it is less than \$600. More than two-thirds of the counties show gains since 1890 in the value of farms.

The increase since 1890 in the value of implements and machinery has been relatively greater and more general than that in any other item of farm property. Only six counties, Currituck, Durham, Gates, Granville, Macon, and Warren, report a decrease, and in most instances this has been accompanied by a decrease in the value of live stock. This latter value, however, has increased generally in the past ten years.

The amount paid for labor in 1899 varied greatly in different sections of the state, the lowest expenditure per farm being reported from the mountainous western border counties, and the highest from the eastern coast counties, where diversified farming prevails.

For fertilizers, the average expenditure per farm was approximately \$20. The minimum of less than \$1 per farm was found in a few extreme western counties, where corn was the principal crop, and the maximum of \$80 per farm, in Scotland county, the average in the central counties being about \$30 per farm.

#### FARM TENURE.

Table 4 gives a comparative exhibit of farm tenure for 1880, 1890, and 1900. The farms operated by tenants are divided into two groups, designated as farms operated by "cash tenants" and "share tenants." These groups comprise, respectively: (1) Farms operated by individuals who pay a rental in cash or a stated amount of labor or farm produce; (2) farms operated by individuals who pay as rental a stated share of the products.

In Table 5 the tenure of farms for 1900 is given by race of farmer. The farms under the classification "owner" in Table 4 are subdivided in Table 5 into groups, designated as farms operated by "owners," "part owners," "owners and tenants," and "managers." These groups comprise, respectively: (1) Farms operated by individuals who own all the land they cultivate; (2) farms operated by individuals who own a part of the land and rent the remainder from others; (3) farms operated under the joint direction and by the united labor of two or more individuals, one owning the farm or a part of it, and the other, or others, owning no part, but receiving for supervision or labor a share of the products; and (4) farms operated by individuals who receive for their supervision and other services a fixed salary from the owners.

TABLE 4.—NUMBER AND PER CENT OF FARMS OF SPECIFIED TENURES: 1880 TO 1900.

YEAR.	Total number of farms.	NUMBER OF FARMS OPERATED BY—			PER CENT OF FARMS OPERATED BY—		
		Owners. <sup>1</sup>	Cash tenants.	Share tenants.	Owners. <sup>1</sup>	Cash tenants.	Share tenants.
1880	224,637	131,629	19,916	73,092	58.6	8.9	32.5
1890	178,359	117,469	10,572	50,318	65.9	5.9	28.2
1900	167,609	104,887	8,644	44,078	66.5	5.6	28.0

<sup>1</sup>Including "part owners," "owners and tenants," and "managers."

TABLE 5.—NUMBER AND PER CENT OF FARMS OF SPECIFIED TENURES, JUNE 1, 1900, CLASSIFIED BY RACE OF FARMER.

PART 1.—NUMBER OF FARMS OF SPECIFIED TENURES.

RACE.	Total number of farms.	Owners.	Part owners.	Owners and tenants.	Managers.	Cash tenants.	Share tenants.
The State.....	224,637	113,524	15,454	1,594	1,057	19,916	73,092
White.....	169,773	100,320	11,224	1,508	936	9,585	46,200
Colored.....	54,864	13,204	4,230	86	121	10,331	26,892
Indian.....	868	642	33	2	2	63	126
Negro.....	53,996	12,562	4,197	84	119	10,268	26,706

PART 2.—PER CENT OF FARMS OF SPECIFIED TENURES.

The State.....	100.0	50.5	6.9	0.7	0.5	8.9	32.5
White.....	100.0	59.1	6.6	0.9	0.6	5.6	27.2
Colored.....	100.0	24.1	7.7	0.2	0.2	18.8	49.0
Indian.....	100.0	74.0	3.8	0.2	0.2	7.3	14.5
Negro.....	100.0	23.3	7.8	0.1	0.2	19.0	49.6

In the period from 1880 to 1900 the total number of farms increased 42.5 per cent, the greater part of the increase taking place in the last decade. The number of farms operated by owners has increased 25.5 per cent since 1880; by cash tenants, 130.4 per cent; and by share tenants, 65.8 per cent. The percentages shown in Table 4 indicate that the number of farms operated by owners has not increased so rapidly since 1880 as the number operated by tenants.

Of the farms of the state, 75.6 per cent are operated by white farmers and 24.4 per cent by colored farmers. Of the white farmers, 66.6 per cent own all or a part of the farms they operate, and 33.4 per cent operate farms owned by others. For the colored farmers, the corresponding percentages are 32.0 and 68.0. Of the colored farmers, 98.4 per cent are negroes, of whom nearly one-third own all or a part of their farms, and the remainder are Indians, more than three-fourths of whom are owners.

The ratio which the number of farms rented for cash bears to the total number of tenant farms, varies with the race of the tenants and the kind of crops grown. In the western counties, where diversified farming prevails and practically all the farmers are white, share tenants greatly outnumber cash tenants; but in the leading cotton-growing counties, where approximately one-half of the farmers are colored, the number of cash and share tenants are about equal. The greater number of colored farmers in the cotton counties are classed as cash tenants, but where the local contract system prevails the distinguishing line between cash and share tenure is hard to draw.

No previous census has reported the number of farms operated by "part owners," "owners and tenants," or "managers," but it is believed that the number conducted by the last-named class is constantly increasing.

FARMS CLASSIFIED BY RACE OF FARMER AND BY TENURE.

Tables 6 and 7 present the principal statistics for farms classified by race of farmer and by tenure.

TABLE 6.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY RACE OF FARMER, AND BY TENURE, WITH PERCENTAGES.

RACE OF FARMER, AND TENURE.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	224,637	101.3	22,749,356	100.0	\$233,834,693	100.0
White farmers.....	169,773	116.6	19,794,218	87.0	204,806,528	87.6
Negro farmers.....	53,996	53.6	2,894,210	12.7	28,458,176	12.2
Indian farmers.....	868	70.2	60,928	0.3	509,989	0.2
Owners.....	113,524	126.4	14,345,746	63.1	144,032,808	61.6
Part owners.....	15,454	95.2	1,471,445	6.5	15,467,836	6.6
Owners and tenants.....	1,594	158.6	241,839	1.1	2,489,429	1.1
Managers.....	1,057	397.8	420,450	1.8	6,099,326	2.6
Cash tenants.....	19,916	80.5	1,602,859	7.0	15,748,869	6.7
Share tenants.....	73,092	63.8	4,664,017	20.5	49,996,425	21.4

TABLE 7.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY RACE OF FARMER AND BY TENURE.

RACE OF FARMER, AND TENURE.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total invest- ment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and im- prove- ments (except build- ings).	Build- ings.	Imple- ments and ma- chinery.	Live stock.		
The State-----	\$632	\$235	\$40	\$184	\$353	38.9
White farmers.....	723	281	48	155	386	32.0
Negro farmers.....	349	92	17	68	274	52.0
Indian farmers.....	393	94	19	81	233	39.7
Owners.....	739	308	54	168	389	30.7
Part owners.....	604	220	41	136	348	34.8
Owners and tenants.....	912	377	69	204	443	28.3
Managers.....	3,451	1,661	195	459	1,310	22.7
Cash tenants.....	508	147	27	109	320	40.5
Share tenants.....	458	124	21	81	290	42.4

Approximately, one-fourth of the farms of the state are operated by negro farmers. Their farms, however, comprise slightly more than one-eighth of the total farm acreage of the state, and represent, in value, less than one-eighth of the total farm property. This indicates that the holdings of colored farmers are small, the average size of their farms being but 53.6 acres compared with 116.6 acres for white farmers. The average values per farm of their land, buildings, implements and machinery, and live stock, are correspondingly low. On the other hand it appears from Table 7 that they obtained in 1899 a higher per cent of gross income on their investments in farm property than did white farmers.

This apparent anomaly is traceable, in general, to certain distinguishing racial characteristics, and, in particular, to the contract system under which nearly all negro tenants lease their lands. The first point relates to the recognized tendency on the part of the more progressive white farmer to constantly improve his property, especially

his buildings and fences, thus adding to its market value, although not materially increasing its productive capacity per acre. The colored farmer, on the other hand, adds comparatively little to his fixed capital in the way of improvements, and his income per acre naturally represents a higher percentage of the capital invested than in the case of the white farmer. In addition, under the prevailing contract system, the negroes lease small tracts of the best and most highly improved land of the plantations, which they cultivate under the supervision of the land owner or his hired manager. This land appears in the census reports as farms of negro tenant farmers. Unimproved and less productive tracts of land constitute the greater part of the farms of the white plantation owners as reported by the census. The white landlord commonly owns the greater number of the working animals and most of the implements and machinery used by his colored tenants. These being kept for the most part on the farm where the landlord resides, were reported as part of his property, while the products obtained through their use were reported under the names of the tenants.

The above considerations, it is believed, not only explain the high per cent of gross income shown for the negro farmers, but also the low rates shown for managers and owners as compared with those given for cash and share tenants. It is evident, therefore, that a high rate of gross income on investment can not properly be construed as proof of superior farm management.

#### FARMS CLASSIFIED BY AREA.

Tables 8 and 9 present the principal statistics for farms classified by area.

TABLE 8.—NUMBER AND ACREAGE OF FARMS, AND VALUES OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY AREA, WITH PERCENTAGES.

AREA.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	224, 687	101.8	22,749,356	100.0	\$233,834,693	100.0
Under 3 acres.....	1,202	1.9	2,252	( <sup>1</sup> )	\$18,625	0.1
3 to 9 acres.....	11,323	6.1	69,345	0.3	2,758,498	1.2
10 to 19 acres.....	20,659	13.8	285,943	1.3	6,170,124	2.6
20 to 49 acres.....	59,913	31.4	1,880,512	8.3	29,158,570	12.5
50 to 99 acres.....	55,028	68.0	3,742,478	16.5	46,605,601	19.9
100 to 174 acres.....	44,052	125.2	5,514,229	24.2	58,048,386	24.8
175 to 259 acres.....	17,012	207.6	3,531,378	15.5	38,714,851	14.4
260 to 499 acres.....	11,224	341.4	3,832,180	16.8	82,494,016	35.3
500 to 999 acres.....	8,275	640.9	2,008,813	9.2	14,859,701	6.4
1,000 acres and over.....	949	1,888.5	1,792,226	7.9	9,711,391	4.2

<sup>1</sup> Less than one-tenth of 1 per cent.

TABLE 9.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY AREA.

AREA.	AVERAGE VALUES PER FARM OF--					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except build-ings).	Build-ings.	Imple-ments and ma-chinery.	Live stock.		
The State-----	\$632	\$235	\$40	\$134	\$353	33.9
Under 3 acres-----	92	137	8	28	75	28.2
3 to 9 acres-----	105	94	10	35	88	36.4
10 to 19 acres-----	154	84	12	49	138	46.2
20 to 49 acres-----	281	109	20	77	246	50.9
50 to 99 acres-----	501	189	34	123	327	38.7
100 to 174 acres-----	799	293	53	173	427	32.4
175 to 259 acres-----	1,226	439	80	237	566	28.5
260 to 499 acres-----	1,834	641	108	312	755	26.1
500 to 999 acres-----	2,981	965	158	430	1,115	24.6
1,000 acres and over-----	6,998	2,186	303	746	1,950	19.1

The group of medium-sized farms, containing from 100 to 174 acres each, comprises nearly one-fourth of the total farm acreage, and the same proportion of the total value of farm property.

In general, the average values of the different forms of farm property shown in Table 9 rise in unbroken series as the farms increase in size. The relatively high value of buildings on farms under 3 acres, forms the only striking exception to this rule. For this group of farms values are disproportionately high, as it contains nearly half of the florists' establishments of the state and a number of city dairies. The incomes from these industries depend less upon the acreage of land used, than upon the amount of capital invested in buildings and implements and the amounts expended for labor and fertilizers.

The average gross incomes per acre for the various groups classified by area are as follows: Farms under 3 acres, \$39.89; 3 to 9 acres, \$14.46; 10 to 19 acres, \$9.97; 20 to 49 acres, \$7.89; 50 to 99 acres, \$4.82; 100 to 174 acres, \$3.41; 175 to 259 acres, \$2.72; 260 to 499 acres, \$2.21; 500 to 999 acres, \$1.74; and 1,000 acres and over, \$1.03.

#### FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

In Tables 10 and 11 farms are classified by principal source of income. If the value of the hay and grain raised on any farm exceeds that of any other crop and constitutes at least 40 per cent of the total value of products

not fed to live stock, the farm is classified as a "hay and grain" farm. If vegetables are the leading crop, constituting 40 per cent of the value of the products, it is a "vegetable" farm. The farms of the other groups are classified in accordance with the same general principle. "Miscellaneous" farms are those whose operators do not derive 40 per cent of their income from any one class of farm products. Farms with no income in 1899 are classified according to the agricultural operations upon other farms in the same locality.

TABLE 10.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME, WITH PERCENTAGES.

PRINCIPAL SOURCE OF INCOME.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	224,637	101.3	22,749,356	100.0	\$233,834,693	100.0
Hay and grain.....	44,648	97.8	4,368,214	19.2	48,648,280	20.8
Vegetables.....	3,944	75.8	299,039	1.3	3,790,823	1.6
Fruit.....	2,191	107.4	235,258	1.0	2,755,871	1.2
Live stock.....	28,607	116.8	2,756,147	12.1	27,621,676	11.8
Dairy produce.....	917	115.5	105,893	0.5	1,994,126	0.9
Tobacco.....	22,626	94.2	2,131,693	9.4	21,902,127	9.4
Cotton.....	48,896	87.1	4,260,431	18.7	48,522,433	20.8
Rice.....	412	111.8	46,063	0.2	568,507	0.2
Sugar.....	23	59.5	1,868	(1)	12,578	(1)
Flowers and plants.....	15	7.9	119	(1)	67,095	(1)
Nursery products.....	25	97.6	2,441	(1)	100,585	(1)
Miscellaneous.....	77,338	110.5	8,542,690	37.6	77,856,092	33.3

<sup>1</sup> Less than one-tenth of 1 per cent.

TABLE 11.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

PRINCIPAL SOURCE OF INCOME.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State.....	\$682	\$235	\$40	\$184	\$353	33.9
Hay and grain.....	690	227	44	122	292	26.8
Vegetables.....	556	260	37	108	364	37.8
Fruit.....	765	312	41	140	461	35.6
Live stock.....	681	258	42	189	273	23.4
Dairy produce.....	1,124	635	87	329	564	25.9
Tobacco.....	566	245	38	119	486	50.2
Cotton.....	632	200	39	121	405	40.8
Rice.....	944	289	46	101	276	20.0
Sugar.....	289	155	35	68	162	29.7
Flowers and plants.....	2,639	1,750	41	43	1,682	37.6
Nursery products.....	2,552	1,122	197	152	5,188	129.0
Miscellaneous.....	591	242	39	135	832	33.0

For the several classes of farms, the average values per acre of products not fed to live stock are as follows: Farms whose operators derive their principal income from flowers and plants, \$212.05; nursery products, \$53.14; tobacco, \$5.16; dairy produce, \$4.88; vegetables, \$4.80; cotton, \$4.64; fruit, \$4.29; hay and grain, \$2.99; sugar, \$2.73; rice, \$2.47; and live stock, \$2.34. In computing

these averages, the total area of the farms is used, and not the acreage devoted to the crop from which the principal income is derived.

The wide variations shown in the averages and percentages of gross income are largely due to the fact that, in computing gross income no deductions are made for expenditures. For florists' establishments and nurseries, the average expenditure for such items as labor and fertilizers represents a far greater percentage of the gross income than in the case of "live-stock" and "hay and grain" farms. If it were possible to present the average net income, the variations shown would be comparatively slight.

#### FARMS CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

Tables 12 and 13 present data relating to farms classified by the reported value of products not fed to live stock.

TABLE 12.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK, WITH PERCENTAGES.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	224,637	101.3	22,749,356	100.0	\$233,834,693	100.0
\$0.....	1,263	49.8	62,886	0.3	533,050	0.2
\$1 to \$49.....	12,590	31.6	397,850	1.7	3,296,660	1.4
\$50 to \$99.....	21,855	43.2	944,760	4.2	7,710,840	3.3
\$100 to \$249.....	74,896	66.3	4,967,125	21.8	44,688,610	19.1
\$250 to \$499.....	72,939	105.7	7,706,640	33.9	76,534,713	32.7
\$500 to \$999.....	32,600	170.9	5,571,414	24.5	62,449,580	26.7
\$1,000 to \$2,499.....	7,470	314.8	2,351,842	10.3	28,467,030	12.2
\$2,500 and over.....	1,024	729.3	746,839	3.3	10,154,260	4.4

TABLE 13.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total invest- ment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and im- prove- ments (except build- ings).	Build- ings.	Imple- ments and ma- chinery.	Live stock.		
The State.	\$682	\$235	\$40	\$184	\$353	33.9
\$0	289	88	10	35	—	—
\$1 to \$49	167	60	7	28	27	10.4
\$50 to \$99	218	79	11	46	79	22.6
\$100 to \$249	368	126	20	83	177	29.7
\$250 to \$499	634	232	40	143	361	34.4
\$500 to \$999	1,155	442	80	289	684	35.7
\$1,000 to \$2,499	2,298	913	161	499	1,412	43.1
\$2,500 and over	5,392	2,505	484	995	4,681	46.2

Some of the farms reporting no income for 1899 were fruit farms with trees or vines too young to bear, and others were the country homes of business and professional men. There were some cases, too, in which a report of the products of the farm could not be secured,



because the person in possession on June 1, 1900, was not the one who conducted the farm in 1899. To this extent the reports fall short of giving a complete statement of farm income in 1899.

#### LIVE STOCK.

At the request of the various live-stock associations of the country, a new classification of domestic animals was adopted for the Twelfth Census. The age grouping for neat cattle was determined by their present and prospective relations to the dairy industry and to the supply of meat products. Horses and mules are classified by age, and neat cattle and sheep, by age and sex. The new classification permits a very close comparison with previous census reports.

Table 14 presents a summary of live-stock statistics.

TABLE 14.—NUMBER OF DOMESTIC ANIMALS, FOWLS, AND BEES ON FARMS, JUNE 1, 1900, WITH TOTAL AND AVERAGE VALUES, AND NUMBER OF DOMESTIC ANIMALS NOT ON FARMS.

LIVE STOCK.	Age in years.	ON FARMS.			NOT ON FARMS.
		Number.	Value.	Average value.	Number.
Cattle	Under 1	142,686	\$549,844	\$3.85	3,328
Steers	1 and under 2	43,828	335,652	8.30	795
Steers	2 and under 3	26,579	329,944	12.41	422
Steers	3 and over	30,632	572,244	18.64	688
Bulls	1 and over	17,741	188,507	10.63	240
Heifers	1 and under 2	68,732	551,321	8.17	975
Cows kept for milk	2 and over	283,178	4,426,708	18.98	18,577
Cows and heifers not kept for milk.	2 and over	61,082	675,728	11.06	874
Colts	Under 1	5,807	181,075	22.58	128
Horses	1 and under 2	5,927	238,882	39.46	203
Horses	2 and over	147,419	8,430,651	57.18	15,449
Mule colts	Under 1	8,076	81,927	25.63	40
Mules	1 and under 2	5,600	256,401	45.79	76
Mules	2 and over	126,934	8,348,970	65.70	3,661
Asses and burros	All ages	825	89,460	84.19	92
Lambs	Under 1	98,129	121,923	1.34	287
Sheep (ewes)	1 and over	164,105	276,389	1.68	615
Sheep (rams and wethers)	1 and over	44,707	76,109	1.70	219
Swine	All ages	1,800,469	2,516,419	1.94	40,009
Goats	All ages	42,901	37,597	0.89	1,124
Fowls:					
Chickens <sup>a</sup>		3,871,858			
Turkeys		120,737			
Geese		284,424	1,431,158		
Ducks		102,942			
Bees (swarms of)		244,639	420,802	1.76	
Value of all livestock			80,106,173		

<sup>1</sup> The number reported is of fowls over 3 months old. The value is of all, old and young.

<sup>2</sup> Including Guinea fowls.

The total value of all live stock on farms, June 1, 1900, was \$80,106,173, of which amount 29.2 per cent represents the value of horses; 28.8 per cent, that of mules; 14.7 per cent, that of dairy cows; 10.8 per cent, that of other neat cattle; 8.3 per cent, that of swine; 4.8 per cent, that of poultry; and 3.4 per cent, that of all other live stock.

No reports were secured of the value of live stock not on farms, but it is probable that such animals have higher average values than those on farms. Allowing the same averages, the value of domestic animals not on farms would be \$1,503,397, which would make the value of all live stock in the state, exclusive of poultry and bees not on farms, approximately \$81,609,570.

#### CHANGES IN LIVE STOCK ON FARMS.

The following table shows the changes since 1850 in the number of the most important domestic animals.

TABLE 15.—NUMBER OF SPECIFIED DOMESTIC ANIMALS ON FARMS: 1850 TO 1900.

YEAR.	Dairy cows.	Other neat cattle.	Horses.	Mules and asses.	Sheep. <sup>1</sup>	Swine.
1900	233,178	391,840	159,158	186,485	208,812	1,800,469
1890	223,416	407,487	131,451	100,011	402,247	1,251,000
1880	232,133	425,296	133,626	81,871	461,685	1,453,541
1870	196,751	324,431	102,739	50,084	468,495	1,075,215
1860	228,623	465,187	150,051	61,383	548,749	1,833,214
1850	221,795	471,711	148,693	25,259	595,249	1,812,813

<sup>1</sup> Lambs not included.

The numbers of domestic animals of all classes have fluctuated from decade to decade. During the Civil War period there was a marked decrease in every class, except that of mules and asses. Since then the number of all kinds of domestic animals, except sheep, has increased. Taking the half century as a whole, the numbers of dairy cows and horses have undergone no material change. Neat cattle other than dairy cows have decreased about 17 per cent. There are only about two-thirds as many swine as were reported in 1850, and not much more than one-third as many sheep. Mules and asses are more than five times as numerous as they were fifty years ago, and are the only class of domestic animals showing a marked increase.

For the decade 1890 to 1900, increases are shown as follows: Mules and asses, 36.4 per cent; horses, 21.1 per cent; dairy cows, 4.4 per cent; and swine, 4.0 per cent. Sheep and neat cattle other than dairy cows decreased in number 48.1 per cent and 4.0 per cent, respectively.

In comparing the poultry report of 1900 (see Table 14) with that of 1890 it should be borne in mind that in 1900 the enumerators were instructed to report no fowls under 3 months old, while no such restriction was made in 1890. This fact, considered in connection with the increase of 50.6 per cent in the number of eggs produced, indicates that the decreases in numbers of all kinds of fowls, as reported by the census, are more apparent than real. Compared with the figures for 1890, those of 1900 show decreases as follows: Chickens, 48.4 per cent; ducks, 39.2 per cent; turkeys, 38.8 per cent; and geese, 24.4 per cent.

#### ANIMAL PRODUCTS.

Table 16 is a summarized exhibit of the animal products of 1899.

TABLE 16.—QUANTITIES AND VALUES OF SPECIFIED ANIMAL PRODUCTS, AND VALUES OF POULTRY RAISED, ANIMALS SOLD, AND ANIMALS SLAUGHTERED ON FARMS, IN 1899.

PRODUCTS.	Unit of measure.	Quantity.	Value.
Wool	Pounds	797,176	\$150,510
Mohair and goat hair	Pounds	416	97
Milk	Gallons	189,525,749	
Butter	Pounds	16,918,802	\$6,176,397
Cheese	Pounds	26,888	
Eggs	Dozens	17,704,020	1,810,116
Poultry			2,639,970
Honey	Pounds	2,477,800	
Wax	Pounds	135,920	258,730
Animals sold			2,485,252
Animals slaughtered			7,109,655
Total			20,634,727

<sup>1</sup> Comprises all milk produced, whether sold, consumed, or made into butter or cheese.

<sup>2</sup> Comprises the value of butter and cheese and of all milk sold or consumed.



The total value of animal products for the state in 1899 was \$20,684,727, or 23.2 per cent of the value of all farm products, and 26.1 per cent of the gross farm income. The value of animal products for 1899 was more than two-thirds as great as that of all live stock on farms, June 1, 1900. Of the above amount, 46.4 per cent represents the value of animals sold and animals slaughtered on farms; 29.8 per cent, that of dairy products; 21.8 per cent, that of poultry and eggs; 1.3 per cent, that of honey and wax; and 0.7 per cent, that of wool, mohair, and goat hair.

#### ANIMALS SOLD AND ANIMALS SLAUGHTERED.

The value of animals sold and animals slaughtered on farms in 1899 was \$9,594,907, or 12.1 per cent of the gross farm income. Of all farms in the state reporting live stock, 68,473, or 32.2 per cent, report sales of live animals, the average receipts per farm being \$36.30. Animals slaughtered on farms are reported by 176,803 farmers, or 83.2 per cent of those reporting live stock, the average value per farm being \$40.21.

In obtaining these reports, the enumerators were instructed to secure from each farm operator a statement of the amount received from sales in 1899, less the amount paid for animals purchased during the same year.

#### DAIRY PRODUCE.

Of the \$6,175,397 given in Table 16 as the value of dairy products in 1899, \$5,447,873, or 88.2 per cent, represents the value of such products consumed on farms, and \$727,524, or 11.8 per cent, the amount received from sales. Of the latter amount, \$478,762 was received from the sale of 2,782,905 pounds of butter; \$242,968, from 1,826,631 gallons of milk; \$4,162, from 4,525 gallons of cream; and \$1,632, from 19,200 pounds of cheese.

In 1899, 34,275,084 more gallons of milk were reported than in 1889, a gain of 62.0 per cent. The quantity of butter made on farms increased 28.8 per cent in the same time, while the quantity of cheese made in 1899 was less than one-half as great as in 1889.

#### POULTRY AND EGGS.

There were 17,704,020 dozens of eggs reported in 1899, or 50.6 per cent more than in 1889. Of the \$4,500,086 given in Table 16 as the value of poultry and eggs, 59.8 per cent represents the value of poultry raised in 1899, and 40.2 per cent, that of eggs produced.

#### HONEY AND WAX.

The production of honey for 1899 was 2,477,800 pounds, and that of wax, 135,920 pounds, a gain of 4.4 per cent in honey and 7.5 per cent in wax, since 1889.

#### WOOL.

The production of wool has fluctuated from decade to decade, the report for 1900 showing an increase of 8.6 per

cent since 1890. This increase is more apparent than real owing to the fact that the fleeces from at least 79,674 sheep were omitted from the table in 1890, but included in a general estimate of wool shorn after the census enumeration.

#### HORSES, MULES, AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS.

Table 17 presents, for the specified classes of farms, the number reporting horses, mules, and dairy cows, and the average number of these animals per farm. In computing the averages presented, only those farms which report the kind of stock under consideration are included.

TABLE 17.—HORSES, MULES, AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS, JUNE 1, 1900.

CLASSES.	HORSES.		MULES.		DAIRY COWS.	
	Farms reporting.	Average per farm.	Farms reporting.	Average per farm.	Farms reporting.	Average per farm.
Total .....	108,160	1.5	88,591	1.5	144,553	1.6
White farmers.....	89,944	1.5	69,864	1.6	124,054	1.7
Colored farmers.....	18,216	1.2	18,727	1.2	20,499	1.3
Owners <sup>1</sup> .....	72,837	1.5	55,587	1.6	97,599	1.7
Managers.....	669	2.4	616	3.8	694	3.5
Cash tenants.....	10,188	1.3	9,365	1.4	9,115	1.4
Share tenants.....	21,466	1.3	28,023	1.3	37,145	1.3
Under 20 acres.....	7,448	1.2	4,610	1.1	12,223	1.2
20 to 99 acres.....	51,549	1.3	42,524	1.3	69,886	1.4
100 to 174 acres.....	26,457	1.6	21,871	1.6	35,155	1.7
175 to 259 acres.....	11,335	1.8	9,578	1.8	14,213	2.0
260 acres and over.....	11,371	2.1	10,008	2.5	18,126	2.6
Hay and grain .....	20,430	1.6	14,973	1.6	29,090	1.4
Vegetables.....	1,731	1.4	958	1.6	1,374	1.8
Fruit.....	1,112	1.4	805	1.5	1,241	1.7
Live stock.....	13,450	1.7	7,881	1.6	19,203	1.9
Dairy.....	613	2.0	826	1.9	917	5.8
Tobacco.....	11,745	1.4	9,089	1.4	11,490	1.4
Cotton.....	20,024	1.4	25,293	1.5	25,660	1.4
Rice.....	232	1.7	78	1.6	174	2.1
Miscellaneous <sup>2</sup> .....	38,823	1.4	29,188	1.5	55,404	1.7

<sup>1</sup> Including "part owners" and "owners and tenants."

<sup>2</sup> Including sugar farms, florists' establishments, and nurseries.

In North Carolina, as in other states where cotton is a staple crop and much of the farm labor is performed by negroes, large numbers of mules are used as work animals. For most classes of farms the average numbers of mules and horses are about equal, but on farms operated by managers, and on farms of the largest area, more mules than horses are reported. This is due to the fact that these two classes of farms include a relatively large number of cotton plantations.

If the numbers of horses and mules be combined, the average number of work animals per farm compares favorably with the corresponding figures for the more intensively cultivated farms of New England.

#### CROPS.

The following table gives the statistics of the principal crops of 1899.

TABLE 18.—ACREAGES, QUANTITIES, AND VALUES OF PRINCIPAL FARM CROPS IN 1899.

CROPS.	Acres.	Unit of measure.	Quantity.	Value.
Corn	2,720,206	Bushels	34,818,860	\$17,304,407
Wheat	746,984	Bushels	4,342,351	3,463,726
Oats	270,876	Bushels	2,454,768	991,516
Barley	475	Bushels	4,237	2,835
Rye	28,074	Bushels	133,730	86,228
Buckwheat	5,168	Bushels	52,572	26,482
Broom corn	67	Pounds	30,490	1,501
Rice	22,279	Pounds	7,838,580	203,075
Kafir corn	2	Bushels	8	6
Flaxseed	2	Bushels	9	9
Clover seed		Bushels	831	1,347
Grass seed		Bushels	1,815	2,574
Hay and forage	229,998	Tons	429,824	4,242,561
Cottonseed		Tons	1,205,999	2,290,771
Cotton	1,007,020	Bales	459,707	15,696,952
Tobacco	203,023	Pounds	127,608,400	8,068,691
Hops	( <sup>2</sup> )	Pounds	85	12
Peanuts	95,856	Bushels	3,460,439	1,852,110
Dry beans	5,381	Bushels	49,518	50,703
Dry pease	88,407	Bushels	876,107	649,194
Potatoes	28,619	Bushels	1,630,445	862,509
Sweet potatoes	68,730	Bushels	5,781,587	2,119,956
Onions	836	Bushels	116,841	86,597
Miscellaneous vegetables	63,762			3,064,895
Maple sugar		Pounds	1,180	117
Maple sirup		Gallons	129	11
Sugar cane	25	Tons	911	54
Sugar cane sirup		Gallons	1,957	1,008
Sorghum cane	20,227	Tons	35,980	17,088
Sorghum sirup		Gallons	1,419,570	429,814
Small fruits	6,887			599,963
Grapes	41,734	Centals	123,440	5197,262
Orchard fruits	4158,987	Bushels	5,124,959	41,269,614
Tropical fruits				8,446
Nuts				8,413
Forest products				4,921,740
Flowers and plants	61			31,163
Seeds	139			8,382
Nursery products	1,149			135,084
Miscellaneous	80			2,494
Total	5,769,954			68,624,911

<sup>1</sup> Exclusive of 10,510 tons, valued at \$116,871, sold in seed cotton and included with the cotton.

<sup>2</sup> Less than 1 acre.

<sup>3</sup> Sold as cane.

<sup>4</sup> Estimated from number of vines or trees.

<sup>5</sup> Including value of raisins, wine, etc.

<sup>6</sup> Including value of cider, vinegar, etc.

Of the total value of crops in 1899, cotton, including seed, constituted 26.2 per cent; corn, 25.2 per cent; other cereals, including rice, 7.0 per cent; vegetables, including potatoes, sweet potatoes, and onions, 8.9 per cent; forest products, 7.2 per cent; fruits and nuts, 3.0 per cent; hay and forage, 6.2 per cent; and all other products, 16.3 per cent.

The acreage devoted to corn constituted 47.1 per cent of the total area in crops and yielded 25.2 per cent of the total receipts, while cotton, occupying but 17.5 per cent of the total acreage, yielded 26.2 per cent of the total receipts.

The average values per acre of crops were as follows: Flowers and plants, \$510.87; nursery products, \$117.57; onions, \$103.58; tobacco, \$39.59; potatoes, \$36.52; sweet potatoes, \$30.84; hay and forage, \$18.45; cotton, including seed, \$17.86; peanuts, \$19.32; orchard fruits, \$7.99; dry beans and dry pease, \$7.46; and cereals, including rice, \$5.82. The crops yielding the greatest returns were grown upon highly improved land and their production required relatively large expenditures for labor and fertilizers.

## CEREALS.

Table 19 is an exhibit of the changes in cereal production since 1849.

TABLE 19.—ACREAGE AND PRODUCTION OF CEREALS: 1849 TO 1899.

## PART 1.—ACREAGE.

YEAR. <sup>1</sup>	Barley.	Buckwheat.	Corn.	Oats.	Rye.	Wheat.
1899	475	5,168	2,720,206	270,876	28,074	746,984
1889	302	1,800	2,360,627	541,851	56,496	666,509
1879	230	5,725	2,305,419	500,415	61,953	646,829

<sup>1</sup> No statistics of acreage were secured prior to 1879.

## PART 2.—BUSHELS PRODUCED.

YEAR.	Barley.	Buckwheat.	Corn.	Oats.	Rye.	Wheat.
1899	4,237	52,572	34,818,860	2,454,768	133,730	4,342,351
1889	3,621	12,621	25,783,623	4,512,762	276,339	4,292,035
1879	2,421	44,668	28,019,839	3,538,068	285,160	3,397,393
1869	3,186	20,109	18,454,215	3,220,105	352,006	2,859,879
1859	3,445	35,924	30,078,604	2,781,860	436,866	4,743,706
1849	2,735	16,704	27,941,031	4,052,078	229,563	2,130,102

The total area devoted to cereals in 1879 was 3,520,571 acres; in 1889, 3,627,585 acres; and in 1899, 3,771,783 acres. Of the total area in 1899, 72.1 per cent was devoted to corn; 19.8 per cent, to wheat; 7.2 per cent, to oats; and 0.9 per cent, to rye, buckwheat, and barley. The percentages of increase in the acreages devoted to the several cereals in the last decade were as follows: Corn, 15.2 per cent; wheat, 12.1 per cent; buckwheat, 187.1 per cent; and barley, 57.3 per cent. The acreage of oats and rye decreased 50.0 per cent and 50.3 per cent, respectively.

A comparison by counties shows that the acreage in corn increased between 1889 and 1899 in nearly every county. The largest acreages were reported by Robeson, Johnston, and Sampson counties. About one-third of the wheat was grown in the counties of the Yadkin River Valley. The production of this cereal has increased steadily since 1869 but the average yield per acre remains comparatively low. The acreage devoted to oats in 1899 was less than one-half as great as that reported for 1889. While this marked decrease was doubtless due, in a large measure, to severe drought in the spring of 1899, it is believed that the crop is not so generally cultivated as it was ten years ago. Rye has decreased steadily in importance since 1859. Neither barley nor buckwheat is grown extensively; the acreages and productions of both have fluctuated widely from decade to decade with a general upward tendency.

The total number of bushels of grain produced in 1849 was 34,372,233; in 1889, 34,880,901, and in 1899, 41,806,518. Comparisons between the crops of the different years have little significance, however, as the production depends to a great extent upon the nature of the season.

## RICE.

In addition to the cereals given in Table 19, rice was grown in 1899 by 5,248 farmers, who reported 22,279 acres of land, and a yield of 7,838,580 pounds, valued at \$203,075. There was an increase in ten years of 82.0 per cent in acreage, and of 34.9 per cent in production, the crop being the largest ever reported.

The average yield per acre was 352 pounds, and the average value for each farm reporting was \$39.

The crop was grown in 45 counties, but 76.4 per cent of the acreage was furnished by the 7 counties of Beaufort, Brunswick, Camden, Hyde, Pasquotank, Perquimans, and Tyrrell, lying on the coast, and on the Albemarle and Pamlico sounds.

#### COTTON.

The following table shows the changes in cotton production since 1849.

TABLE 20.—ACREAGE AND PRODUCTION OF COTTON: 1849 TO 1899.

YEAR.	ACREAGE.		PRODUCTION.		
	Total.	Per cent of increase.	Commercial bales.	Pounds.	Per cent of increase.
1899	1,007,020	12.2	459,707	216,506,930	35.0
1889	1,147,186	28.4	336,261	160,396,497	19.1
1879	893,153		389,598	176,487,894	180.6
1869				62,901,790	12.9
1859				64,753,730	119.2
1849				29,538,000	

<sup>1</sup> Decrease.

The production of cotton in North Carolina has fluctuated greatly since 1849. In 1859 the quantity reported was more than twice that produced in 1849, while during the next decade, when the Civil War affected all industries, there was a decrease of 2.9 per cent. The reports for 1879 showed a great increase in production. This was followed in the next decade by a slight decrease, notwithstanding an increase of 28.4 per cent in acreage. But in the decade just completed, the production increased 35.0 per cent, while the acreage decreased 12.2 per cent.

In 1899, 105,766 farmers devoted to the cultivation of cotton a total area of 1,007,020 acres, or 12.1 per cent of the total improved farm land, and an average of 9.5 acres per farm reporting. The total production was 216,506,930 pounds, an average of 215 pounds per acre and 114 pounds per capita.

The counties reporting the greatest area under cotton are Mecklenburg, Robeson, Wake, Union, Johnston, Anson, Halifax, Wayne, Cleveland, and Edgecombe, ranking in the order named, and reporting in the aggregate 42.6 per cent of the total acreage. These counties are located in the central and southwestern parts of the state.

#### HAY AND FORAGE.

In 1900, 141,532 farmers, or 63.0 per cent of the total number, reported hay or forage crops. Exclusive of cornstalks and corn strippings, an average yield of 1.07 tons per acre was obtained. The total number of acres devoted to hay and forage in 1899 was 229,998, or 20.6 per cent more than ten years before.

In 1899 the acreages and yields of the various kinds of hay and forage were as follows: Wild, salt, and prairie grasses, 17,462 acres and 21,236 tons; millet and Hungarian grasses, 1,959 acres and 2,705 tons; alfalfa or lucern, 243 acres and 392 tons; clover, 27,238 acres and

28,290 tons; other tame and cultivated grasses, 122,879 acres and 122,411 tons; grains cut green for hay, 51,772 acres and 56,780 tons; crops grown for forage, 8,445 acres and 15,006 tons; cornstalks and corn strippings, 843,557 acres and 183,004 tons.

In Table 18 the production of cornstalks and corn strippings is included under "hay and forage," but the acreage is included under "corn," as the forage secured was an incidental product of the corn crop.

#### ORCHARD FRUITS.

The changes in orchard fruits since 1890 are shown in the following table.

TABLE 21.—ORCHARD TREES AND FRUITS: 1890 AND 1900.

FRUITS.	NUMBER OF TREES.		BUSHELS OF FRUIT.	
	1900.	1890.	1899.	1889.
Apples	6,438,871	4,249,468	4,602,751	7,591,541
Apricots	2,549	5,096	245	1,915
Cherries	174,295	111,774	33,899	45,918
Peaches	2,773,788	2,133,004	373,663	2,740,915
Pears	138,836	44,902	25,521	33,910
Plums and prunes	183,451	51,341	22,074	15,516

Increases are shown for the decade in numbers of trees as follows: Apple, 51.5 per cent; peach, 30.0 per cent; cherry, 55.9 per cent. Plum and prune and pear have increased more than threefold. The number of apricot trees decreased about one-half.

Of all trees reported in 1900, 66.1 per cent were apple trees; 28.5 per cent, peach trees; and the remainder, 5.4 per cent, plum, prune, pear, cherry, apricot, and unclassified trees; the latter class, which is not included in the table, numbering 22,389 trees and yielding 3,806 bushels of fruit.

Most of the fruit trees are reported from the western part of the state, Guilford ranking among the leading counties in all varieties. Moore, Burke, and Guilford counties reported about one-eighth of the peach trees, and Wilkes, Buncombe, Surry, Guilford, and Haywood reported about one-sixth of the apple trees.

The value of the orchard products given in Table 18 includes the value of 7,651 barrels of cider, 3,298 barrels of vinegar, and 2,744,450 pounds of dried and evaporated fruits.

#### SEMITROPICAL FRUITS.

In 1900, 1,019 farms representing 66 counties reported 5,057 fig trees. The total amount of fruit produced was 14,510 pounds, valued at \$446. Although fig trees are grown generally throughout the state, those yielding fruit in 1899 were located in 36 counties, principally in the eastern half of the state. Halifax county reported one-fourth of the trees and fruit produced.

#### SMALL FRUITS.

The total area used in the growing of small fruits was 6,837 acres, distributed among 10,873 farms. The value of the fruit produced was \$599,963, an average of \$55.18 per farm. Of the total area, 5,616 acres, or 82.1 per cent,

were devoted to strawberries, of which the total production was 10,674,610 quarts. Over three-fourths of the acreage in this fruit was in the adjoining counties of Duplin, Pender, Sampson, and Wayne. The acreage and production of other berries were as follows: Blackberries and dewberries, 1,073 acres and 1,089,290 quarts; raspberries and Logan berries, 69 acres and 78,050 quarts; currants, 28 acres and 32,360 quarts; gooseberries, 25 acres and 30,340 quarts; and other berries, 26 acres and 29,410 quarts.

#### VEGETABLES.

The value of the vegetables grown in 1899, including potatoes, sweet potatoes, and onions, was \$6,103,957, or 7.7 per cent of the gross farm income. Of this amount 49.7 per cent represents the value of miscellaneous vegetables; 34.8 per cent, that of sweet potatoes; 14.1 per cent, that of Irish potatoes; and 1.4 per cent, that of onions.

Sweet potatoes were grown in 1899 by 112,951 farmers, or approximately one-half the total number in the state. The area devoted to this crop in 1889 was 71,752 acres, and in 1899, 68,730 acres, a decrease of 4.2 per cent. The total crop was 5,781,587 bushels, an average of 84.1 bushels per acre. The leading counties are Columbus, Sampson, Johnston, Beaufort, Brunswick, Duplin, and Robeson, ranking in the order named.

Aside from the land devoted to potatoes, sweet potatoes, and onions, 63,762 acres were used in the growing of miscellaneous vegetables. The products of 38,566 acres were not reported in detail; of the remaining area, 9,814 acres were devoted to watermelons; 9,747, to cabbages; 1,729, to muskmelons; 1,166, to tomatoes; 626, to beans; 611, to cucumbers; 610, to sweet corn; and 893 acres to other vegetables.

#### PEANUTS.

Peanuts were grown in 1899 by 19,685 farmers, who devoted 95,856 acres to their cultivation. The total production was 3,460,439 bushels, an average of 36.1 bushels per acre. In the last decade the gain in acreage was fourfold, and that in production sevenfold. Of the total acreage, 66.6 per cent was reported from the 6 northeastern counties of Bertie, Halifax, Northampton, Hertford, Martin, and Edgecombe, ranking in the order named. The area devoted to peanut growing has increased, at least tenfold since 1889 in each of these counties, while Bertie county shows a gain from 528 acres to 14,499 acres, or about twenty-sevenfold.

#### TOBACCO.

According to the census of 1850, North Carolina produced in 1849, 11,984,786 pounds of tobacco. The production in 1859 was nearly three times as great, while the crop of 1869 fell below that of 1849. In the two succeeding decades, there were large increases, amounting to 15,836,126 pounds, or 142.0 per cent, between 1870 and 1880, and to 9,389,045 pounds, or 34.8 per cent, between 1880 and 1890.

In 1899 tobacco was grown in North Carolina by 51,103 farmers, who obtained from 203,023 acres a yield of 127,503,400 pounds, valued at \$8,038,691. The average value per pound was 6.3 cents. The increase in area in the last decade was 105,946 acres, or 109.1 per cent, and that in production 91,128,142 pounds, or 250.5 per cent. The average yield per acre in 1899 was 628 pounds, against 375 pounds in 1889, and 472 pounds in 1879.

Of the 86 counties reporting the cultivation of tobacco in 1899, the county having the largest acreage was Rockingham, with 16,882 acres. Pitt county reported the largest production, 10,733,010 pounds, and was closely followed by Rockingham, Nash, Wilson, Stokes, Granville, Franklin, Caswell, Greene, and Person counties in the order named. The 12 leading counties of the state contained 61.3 per cent of the entire acreage in tobacco and contributed 63.0 per cent of the total production.

#### SUGAR CANE AND SORGHUM CANE.

In 1899, 57 farmers raised 25 acres of sugar cane, from which they sold 11 tons of cane for \$54, and manufactured from the remaining cane 1,957 gallons of sirup, valued at \$1,008. The entire crop of cane reported was grown in Columbus county. Previous to the present census no cane, sugar, or sirup had been reported from the state since 1869, in which year 42,000 pounds of sugar, and 33,888 gallons of sirup were produced.

In 1899, 20,227 acres of sorghum cane were grown by 48,214 farmers, an average of 0.42 acre for each farm reporting. From this area 5,980 tons of cane were sold for \$17,083, and from the remaining cane 1,419,570 gallons of sirup, valued at \$429,814, were manufactured. This was a decrease since 1889 of 16.0 per cent in acreage and an increase of 150,624 gallons, or 11.9 per cent in production of sirup. The total value of sorghum cane products for 1899 was \$446,897, an average of \$9.27 for each farm reporting. The sorghum crop was distributed quite uniformly over 93 counties of the state.

#### FLOWERS AND PLANTS.

In 1899 the operators of 58 farms raised flowers and plants valued at \$31,163. Of this number, 15 were commercial florists, who reported a gross income of \$25,234, of which \$23,909 was derived from the sale of flowers and plants, and \$1,325 from other products. The capital invested was \$67,095—\$39,585 in land, \$26,255 in buildings and other improvements, \$615 in implements, and \$640 in live stock. The expenditure for fertilizers was \$165, and that for labor \$4,060.

A total of 186,900 square feet of land under glass was reported by the operators of 139 farms, including the 15 florists, who reported 61,444 square feet.

#### NURSERIES.

The 25 nurserymen in the state reported a gross income of \$129,714, of which amount \$118,509 was derived from the sale of trees, shrubs, and plants, and \$11,205 from other products. The total area of land used was 2,441 acres, making the gross income per acre \$53.14. The value of

land was \$63,800; that of buildings and other improvements, \$28,959; that of implements and machinery, \$4,935; and that of live stock, \$3,800. The expenditures for labor and fertilizers were \$27,549 and \$3,636, respectively.

#### LABOR AND FERTILIZERS.

The total expenditure for labor on farms in 1899, including the value of board furnished, was \$5,444,950, an average of \$24 per farm. The average was highest on the most intensively cultivated farms, having been \$1,102 for nurseries, \$271 for florists' establishments, \$70 for dairy farms, \$51 for fruit farms, \$48 for vegetable farms, \$38 for tobacco farms, \$38 for rice farms, \$32 for cotton farms, \$15

for live-stock farms, \$14 for hay and grain farms, and \$5 for sugar farms. "Managers" expended on an average, \$335; "owners," \$29; "cash tenants," \$22; and "share tenants," \$13. White farmers expended \$29 per farm, and colored farmers, \$9.

Fertilizers purchased in 1899 cost \$4,479,030, or an average of \$20 per farm, and an increase since 1890 of \$1,596,792, or 55.4 per cent. The average expenditure in 1899 was greatest for nurseries, amounting to \$145. For vegetable farms the average was \$43; for tobacco farms, \$42; for dairy farms, \$15; for florists' establishments, \$11; for hay and grain farms, \$11; for sugar farms, \$9; for live-stock farms, \$7; and for rice farms, \$5.

#### IRRIGATION STATISTICS.

Irrigation in North Carolina is practiced principally in the cultivation of rice in the tide-water districts. With the exception of a few inland basins or flats, dependent on reservoirs for water supply, the entire crop of irrigated rice is planted along the tide-water rivers, which are fresh, where there is sufficient oscillation of the tides to afford the means of flooding and draining the dike-protected lands.

The rice fields are divided by check banks into sections ranging in area from 5 to 30 acres each, which are subdivided by ditches into beds. Each section is provided with a wooden trunk or box built under the dikes, with a door at each end by means of which the ingress and egress of the water is controlled. These trunks are from 30 to 40 feet long, and from 3 to 4 feet wide, with a depth of 16 inches. In flooding the field, the outer door is hoisted, and as the tide rises the water comes in through the trunk and passes through the ditches. When the tide begins to recede, the inner door is closed and the water is securely stored. To drain the field thoroughly, it is only necessary to open the inner doors at low tide.

The average first cost per acre of preparing rice lands

for irrigation, including the cost of constructing dikes, trunks, check banks, and ditches, is \$34.35.

The principal rice-growing counties in 1899 were Hyde, with 2,203,606 pounds; Brunswick, with 1,215,814 pounds; Pasquotank, with 748,376 pounds; Perquimans, with 573,256 pounds; and Camden, with 556,254 pounds. The total production of the 5 counties was 5,297,306 pounds, or 67.0 per cent of the total crop of the state.

A considerable area of land in Hyde county is irrigated by pumping from Mattamuskeet Lake, situated near the center of the county. The surface of the county is low and flat, and some of the rice land is below the level of the lake, and can be irrigated simply by cutting ditches from the lake to the farms. The highest lift required to irrigate any of the contiguous land is 4 feet. Rice grown in this section is of a superior quality. Land lying below the level of the lake can be irrigated at very little expense, one rice grower reporting that the entire cost of his irrigation plant, including engine, elevator, etc., was but \$500. The area irrigated by this grower was 300 acres, and the average cost per acre for labor and fuel was 75 cents.